

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-7. (Canceled)

1 8. (Currently amended) An optical transmission unit executing light signal
2 dispersion compensation, comprising:
3 an optical branching filter which receives a first wavelength-multiplexed light
4 signal and splits it into at least a first light signal and a second wavelength-multiplexed light
5 signal;
6 a first dispersion compensator coupled to receive the second wavelength-
7 multiplexed light signal and provide dispersion compensation; and
8 a second dispersion compensator which receives a second light signal and
9 compensates for dispersion of the second light signal to produce a compensated light signal; and
10 an optical coupler configured to receive at least the second wavelength-
11 multiplexed light signal from the first dispersion compensator and a the compensated second
12 light signal, and to couple the second wavelength-multiplexed light signal and the compensated
13 second light signal to thereby output a third wavelength-multiplexed light signal.

9. (Canceled)

1 10. (Previously presented) The optical transmission unit according to claim 8
2 further comprising a third dispersion compensator coupled to compensate for dispersion of the
3 first wavelength-multiplexed light signal.

1 11. (Previously presented) The optical transmission unit according to claim 8
2 further comprising an amplifier coupled to amplify the second wavelength-multiplexed light
3 signal from the first dispersion compensator.

1 12. (Currently amended) An optical transmission unit executing light signal
2 dispersion compensation, comprising:
3 a first dispersion compensator to receive a first wavelength-multiplexed light
4 signal and to compensate for dispersion of the first wavelength-multiplexed light signal;
5 an optical branching filter coupled to receive ~~a the~~ first wavelength-multiplexed
6 light signal from the first dispersion compensator and in response to output a first light signal and
7 ~~a second wavelength-multiplexed light signal and a third wavelength-multiplexed light signal;~~
8 a first-second dispersion compensator coupled to compensate for dispersion of the
9 ~~third-second~~ wavelength-multiplexed light signal; and
10 an optical coupler configured to receive the ~~third-second~~ wavelength-multiplexed
11 light signal from the first-second dispersion compensator and to receive a ~~fourth wavelength-~~
12 ~~multiplexed second~~ light signal, and in response thus providing a ~~fifth third~~ wavelength-
13 multiplexed light signal at an output.

13. (Canceled)

1 14. (Currently amended) The optical transmission unit according to claim 12
2 further comprising a third dispersion compensator disposed to compensate for dispersion of the
3 ~~fourth wavelength-multiplexed second~~ light signal.

1 15. (Previously presented) The optical transmission unit according to claim
2 12, further comprising an amplifier coupled to receive and amplify the second wavelength-
3 multiplexed light signal from the first dispersion compensator.